

Patent Abstracts of Japan

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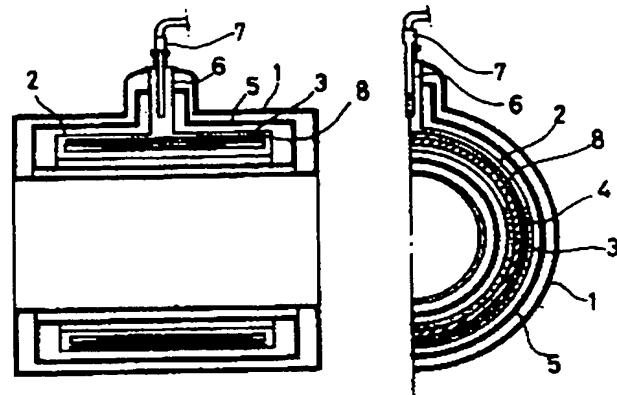
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APPLICANT : MITSUBISHI ELECTRIC CORP;

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TITLE : SUPERCONDUCTIVE MAGNET



ABSTRACT : PURPOSE: To obtain a device with which a sufficient cooling efficiency can be displayed even when the liquid level of liquid helium comes down by a method wherein a heat conducting plate having high coefficient of heat conductivity is covered on a superconductive coil.

CONSTITUTION: A material, having excellent coefficient of heat conductivity such as an aluminum plate or a copper plate and the like, for example, is used for the annular heat conducting plate 8, covering a superconductive coil 3, which is provided in a liquid refrigerant container 2 and used to cover a superconductive coil 3. The lower part of a heat conducting plate 6 is constituted in such a manner that it is dipped in liquid helium 4. In the superconductive magnet constituted as above, the liquid helium is consumed by the heat transmitted to the liquid refrigerant container 2 from outside. The transmitted heat is conveyed to the liquid helium 4 by the heat conducting plate 8 even when the liquid level of the liquid helium comes down, and the temperature rise of the superconductive coil 3 located inside the heat conducting plate 8 can be suppressed. Accordingly, the height of liquid surface of the liquid refrigerant container 2 can be set in a wide range, thereby enabling to sufficiently cope with the lowering of liquid level which may sometimes cause a superconductive breakdown in the conventional device.

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